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Yossi Kaplan

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SMITH FROHWEIN TEMPEL GREENLEE BLAHA, LLC

Two Ravinia Drive

Suite 700

ATLANTA, GA 30346

EXAMINER

AJIBADE AKONAI, OLUMIDE

ART UNIT

PAPER NUMBER

2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/523,149	Applicant(s) KAPLAN ET AL.	
	Examiner OLUMIDE T. AJIBADE AKONAI	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-54 and 56-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 63 is/are allowed.
- 6) ☒ Claim(s) 41-46, 49, 52-54, 56-62, 64, 66 and 67 is/are rejected.
- 7) ☒ Claim(s) 47, 48, 50, 51 and 65 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 41-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 41 recite's the limitation "the data ", in line 16. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim 42 recites the limitation "M" in lines 5 and 6. There is insufficient antecedent basis for this limitation in the claim. It is not clear as to what "M" represents in the claim. Appropriate correction is required to define the term "M" in the claim.

Claim 49 recites the limitation "M" in lines 4 and 5. There is insufficient antecedent basis for this limitation in the claim. It is not clear as to what "M" represents in the claim. Appropriate correction is required to define the term "M" in the claim.

Claims 43-46, 56-59, and 67 depend on claim 42 and therefore stand rejected for the same reason that claim 42 is rejected above.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 41, 52-54, 64 and 66 are rejected under 35 U.S.C. 102(e) as being anticipated by **Tang 6,799,046**.

Regarding **claim 41**, Tang discloses a method for correlating a vehicle with the road on which it travels based on cellular communication, the method comprising the steps of: gathering a sequence of cellular network events related to one or more mobile units (dividing a cell into multiple sections and measuring the signal strength at each section location, see figs. 3-5, col. 4, lines 26-44), and a physical, geographically-defined, accurate location of each mobile unit determined by a physical geographically-defined, accurate location determination system when each cellular network event occurs (measuring the RSSI and recording the location information associated with the RSSI, see figs. 3-5, col. 4, lines 26-44 and 61-67, col. 5, lines 1-19), such cellular network events and physical, geographically-defined accurate locations being gathered during one or more drives and then stored as entries in a learnt database as a location reference (measuring the RSSI and recording the RSSI and the location associated with the measured RSSI in a profile database, see figs. 3-5, col. 4, lines 26-44 and 61-67, col. 5, lines 1-19); and conducting analysis of a new sequence of cellular network events related to a particular mobile unit, the new sequence of cellular network activity events being gathered during a new drive and is independent of physical, geographically-defined location information (a mobile telephone receiving MAHO list

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from MSC, see col. 5, lines 20-27), in conjunction with the learnt database to correlate the new sequence of cellular network events to a physical geographic location (comparing the MAHO vector with the information profile database in order to determine a location of the mobile telephone, see figs. 3-5, col. 5, lines 20-49); whereas the new sequence of cellular network events is extrinsically collected from the base stations or the controllers or main switching systems or communication links between them (a mobile telephone receiving MAHO list from MSC, see col. 5, lines 20-27) and whereas the data is processed to overcome the problem of similar sequences for neighboring routes (MAHO vector matching with the signal information profile database to determine if mobile telephone is in the same location as one of the locations in the signal information profile database see figs. 3-5, col. 5, lines 20-49).

Regarding **claim 53**, Tang discloses a method for correlating a vehicle with the road on which it travels based on cellular communication, the method comprising the steps of: gathering a sequence of cellular network events related to one or more mobile units (dividing a cell into multiple sections and measuring the signal strength at each section location, see figs. 3-5, col. 4, lines 26-44), and a physical, geographically-defined, accurate location of each mobile unit when each event occurs (measuring the RSSI and recording the location information associated with the RSSI, see figs. 3-5, col. 4, lines 26-44 and 61-67, col. 5, lines 1-19), and storing this information into a learnt database as location references (measuring the RSSI and recording the RSSI and the location associated with the measured RSSI in a profile database, see figs. 3-5, col. 4, lines 26-44 and 61-67, col. 5, lines 1-19); and conducting analysis of a new sequence of

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cellular network events related to a particular mobile unit on a new drive independent of the physical, geographic location of the particular mobile unit (a mobile telephone receiving MAHO list from MSC, see col. 5, lines 20-27) in conjunction with the learnt database to identify a match (comparing the MAHO vector with the information profile database in order to determine a location of the mobile telephone, see figs. 3-5, col. 5, lines 20-49); wherein the new sequence of cellular network events is processed to overcome the problem of similar sequences for neighboring routes (MAHO vector matching with the signal information profile database to determine if mobile telephone is in the same location as one of the locations in the signal information profile database see figs. 3-5, col. 5, lines 20-49); and wherein the step of conducting analysis is based on extraction of handover related messages, only from the communication links between the switch and the base station controllers in a cellular network (a mobile telephone receiving MAHO list from MSC, see col. 5, lines 20-27).

Regarding **claim 52** as applied to claim 41, Tang further discloses wherein the step of conducting analysis is based only on a cell ID data (see figs. 3-5, col. 5, lines 20-49).

Regarding **claim 54** as applied to claim 41, Tang further discloses wherein the step of conducting analysis is based on extracting new events from a different percentage of calls in different parts of the cellular system (a mobile telephone in a cellular receiving MAHO list from MSC in the wireless network, see col. 5, lines 20-27).

Regarding **claim 64** as applied to claim 41, Tang further discloses wherein the step of conducting analysis is performed for areas in which at least two roads are

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covered, at least partially, by the same two or more cells (MAHO vector matching with the signal information profile database to determine if mobile telephone is in the same location as one of the locations in the signal information profile database see figs. 3-5, col. 5, lines 20-49).

Regarding **claim 66** as applied to claim 41, Tang further discloses wherein the step of conducting analysis continuously updating the learnt database by: estimating the physical geographic location of handovers within matched sequences that do not appear in the database (see figs. 3-5, col. 5, lines 20-49); and adding new matched sequences to the learnt database (see figs. 3-5, col. 4, lines 26-44 and 61-67, col. 5, lines 1-19).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 60-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tang 6,799,046** in view of **Toshimitsu et al 20060072501 (hereinafter Toshimitsu)**.

Regarding **claim 60**, as applied to claim 41, Tang discloses the claimed limitation except wherein the step of conducting analysis detects traffic incidents by; collecting handover time density information for each route section; alerting of probable incidents whenever handover time density of a new chain decreases rapidly.

Toshimitsu however discloses of conducting analysis detects traffic incidents by; collecting handover time density information for each route section; alerting of probable incidents whenever handover time density of a new chain decreases rapidly (using handover frequency to determine presence of traffic jam on a road, see p.11, [0127]-[0128]).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Tang, by determining the frequency of handoff

on a road as taught by Toshimitsu for the benefit of detecting the speed of a vehicle or traffic condition of the road.

Regarding **claim 61**, as applied to claim 41 Tang discloses the claimed limitation. Toshimitsu further discloses wherein the step of conducting analysis detects incident clearance by: collecting handover time density information for each route section; and notifying of incident clearance whenever, after an incident, the density of news increases significantly (using handover frequency to determine presence of traffic jam on a road, se p.11, [0127]-[0128]).

Regarding **claim 62**, as applied to claim 41, Tang discloses the claimed limitation. Toshimitsu further discloses wherein the step of conducting analysis detects traffic speed by: including a calibration stage in which traffic speed of a route section is correlated with the rate of handovers for this route section at the same time; the handovers rate is measured continuously and by comparing to the handover rate in the calibration stage the speed for the route section is extracted (using handover frequency to determine presence of traffic jam on a road, se p.11, [0127]-[0128]).

Allowable Subject Matter

8. Claims 47, 48, 50, 51, and 65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 63 is allowed.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Raith 6,711,408 discloses position assisted handoff within a wireless communications network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUMIDE T. AJIBADE AKONAI whose telephone number is (571)272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OA

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617